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ENGINEERS, INC.

December 31, 2008   PND: 081090

Lamar Cotten
Borough Manager
Lake and Peninsula Borough
P.O. Box 495
King Salmon, AK 99613

Re: Lake Iliamna Multiple Community Barge Landing Design Project

Dear Mr. Cotten:

Attached please find concept drawings for consideration by the Lake and Peninsula Borough for barge landing developments at five communities on Lake Iliamna. The five communities that PND was asked to visit and consider for barge landing site improvements include Newhalen, Pedro Bay, Kokhanok, Igiugig and Pile Bay. As an alternative to the Newhalen location, Iliamna was also visited and considered in this study effort. In advance of preparing a draft written report of findings and recommendations, the attached concept drawings are intended to allow the Borough to review and comment on various options that were identified by community members.

The RFP identifies this project as being a barge landing development project with potential improvements to upland staging areas, access roads and electrical service to the landings. When contacted about this project local barge operators indicated that a concrete ramp and mooring bollards would be the most beneficial improvements at each community. A barge dock was not desired due to the fact that a crane would be required to offload materials. Under current operations, the barge carries a small piece of equipment that is used to offload materials onto the beach precluding the need for a dock structure.

During the site visits, members of several of the communities requested that the barge landings be designed to also serve as a small boat launch. It was also expressed by community representative that a wave barrier would assist both barge operations and small vessel operations during periods of strong wind and high waves. Finally, community members expressed a desire to have the barge landing site equipped with a small float for moorage of small vessels.

To accommodate the expressed desires of the barge operators as well as members of the various communities we have prepared several concept layouts for each landing site. A base case concept is provided for each site that includes only a concrete ramp, bollards, and upland improvements. For all sites except Pile Bay, two concepts, each showing a wave barrier and small vessel float for moorage, have also been prepared. One of the wave barrier

concepts uses steel construction and the other uses armor rock as the material source for the barrier.

As Borough officials review the concept drawings it should be remembered that costs estimates have been prepared without the benefit of having collected soils information, uplands survey data, or bathymetry of the lake bottom. We have also made assumptions as to the availability of armor rock material at each site. For example, we have assumed that there are no rock sources at the Igiugig site and therefore we have assumed that all such rock material will need to be barged to the site from another location on the lake. We have assumed that a reliable rock source is available at all other sites.

Finally, after review of the site conditions at Newhalen and after discussions with local barge operators it is recommended that a single barge landing facility should be shared by the communities of Iliamna and Newhalen and that the optimum site would be near Iliamna rather than at the Newhalen site. Community members in Newhalen expressed a desire to position a landing site several hundred feet up the Newhalen River. Barge operators that we consulted did not favor the site at Newhalen due to concerns over currents in the river and the shallow water depths.

We trust that the attached concepts will be suitable for your review of our progress to-date. We look forward to any comments that you and other Borough officials provide.

Sincerely,

PND Engineers, Inc. | Anchorage Office

Doug Kenley, P.E.
Vice President, Project Manager

Attachment: Concept drawings with construction cost estimates